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ABSTRACT OF THE DISCLOSURE

The present invention is directed to a composition compositions and methods for altering the levels of seed proteins in cereal grain, particularly reducing the levels of gamma zein proteins in maize and the levels of gamma-kafarin in sorghum. The invention is directed to the alteration of seed protein levels in plant grain, resulting in grain with increased digestibility/nutrient availability, improved amino acid composition/nutritional value, increased response to feed processing, improved silage quality, and increased efficiency of wet or dry-milling. The composition Compositions provided comprises comprise a nucleotide sequence encoding a maize 50 kD gamma zein cDNA, a maize 18 kD alpha-globulin cDNA, and a maize 50 kD legumin 1 seed cDNA, as well as expression cassettes comprising nucleotide sequences of the invention. Also provided are isolated proteins and transformed plant tissue including plants, cells and seeds thereof.